Portland Harbor

CLEANUP NEWSLETTER *Spring 2006*

The Portland Harbor Superfund site is located along the Lower Willamette River between downtown Portland and the confluence with the Columbia River. The U.S. Environmental Protection Agency (EPA) is working with the Oregon Department of Environmental Quality, tribes, and other organizations to investigate and clean up contamination. River sediments are contaminated with metals, pesticides, polychlorinated biphenyls, petroleum byproducts and other hazardous substances. This newsletter provides current information on the Remedial Investigation and Feasibility Study (RI/FS), early actions, source control and human health concerns.

HARBOR-WIDE REMEDIAL INVESTIGATION AND FEASIBILITY STUDY

Lots of information gathered in 2005

During the second half of 2005, several major information-gathering efforts were completed. They included juvenile Chinook sampling, benthic invertebrate sampling, groundwater sampling, sediment core sampling, and bioaccumulation testing. These data, along with previously gathered information on the physical dynamics of the river and fish tissue samples, will help us understand the nature and extent of contamination in Portland Harbor. The Lower Willamette Group (LWG), ten parties that potentially share some of the responsibility for contamination at the site, is doing the remedial investigation and feasibility study with EPA oversight.

When will this information be available?

It will take several months to analyze the Portland Harbor data and complete quality assurance reviews. We anticipate that the draft summary report will be submitted to EPA by the Lower Willamette Group in fall 2006.

Results of sediment sampling completed earlier, during the summer and fall of 2004, were presented to EPA by the LWG in July 2005. This *Round 2A Sediment Site Characterization Summary Report* displays numerical results of the sediment sample analysis. It also has maps showing the locations and concentrations of chemical contaminants in Portland Harbor.

You can download this document from the EPA website at http://yosemite.epa.gov/R10/CLEANUP.NSF/ph/Technical+Documents or request a CD from **Judy Smith** at 503-326-6994.

Also In This Issue

What is happening in 2006?

Answering seemingly simple questions about sediment contamination, such as "*how much? where?* and *what kind?*" are important for developing good cleanup alternatives and making decisions that will protect the river over the long term. EPA and its partners are now identifying remaining "data gaps," where more knowledge is essential to make good cleanup decisions. These remaining data will be collected during additional sampling in 2006 and 2007.

The Portland Harbor investigation is now past the halfway mark of an anticipated seven-year planning schedule that will result in a proposed plan for how to clean up the Harbor, along with a Record of Decision formalizing the action.

In 2006, the focus will be on filling data gaps and beginning to pull the information together in a logical way for the Superfund Feasibility Study. This means analyzing all of the data collected over the past five years to establish a framework for cleanup and start developing and evaluating cleanup alternatives. These data will also support a baseline assessment of risks to human health and the environment. Key focus areas for 2006 include:

Conceptual Site Model — A draft conceptual site model for the Portland Harbor Superfund Site was developed in 2004 and 2005, focusing on upland sources (including groundwater) that may affect the river. This model will be refined in 2006 based on the Round 2 sampling results. It will link upland and in-water information to provide a better picture of contamination in Portland Harbor.

Fate and Transport Model — This tool will predict water flows and sediment movement across the site, and show how contaminants are moving and changing in sediments —a key to designing cleanup alternatives.

Food Web Model — This model will estimate how chemicals from sediment and water are transferred through the food chain. It will also look at what tissue concentrations can be expected in fish and wildlife. The food web model will help predict how various cleanup alternatives would reduce contaminant levels in fish and wildlife.

Preliminary Identification of Sediment Management Areas — Existing data are being used to identify potential "sediment management areas," or areas with high levels of contaminants. Data collected in 2006 will help better define these areas for the Feasibility Study.

Human Health Risk Evaluation — This preliminary analysis will identify and quantify risks to people, based on data about contaminants and the ways in which people use the river.

Ecological Risk Evaluation — This preliminary analysis will identify potential risks to fish, wildlife and the environment from contamination in Portland Harbor.

EARLY ACTION UPDATES

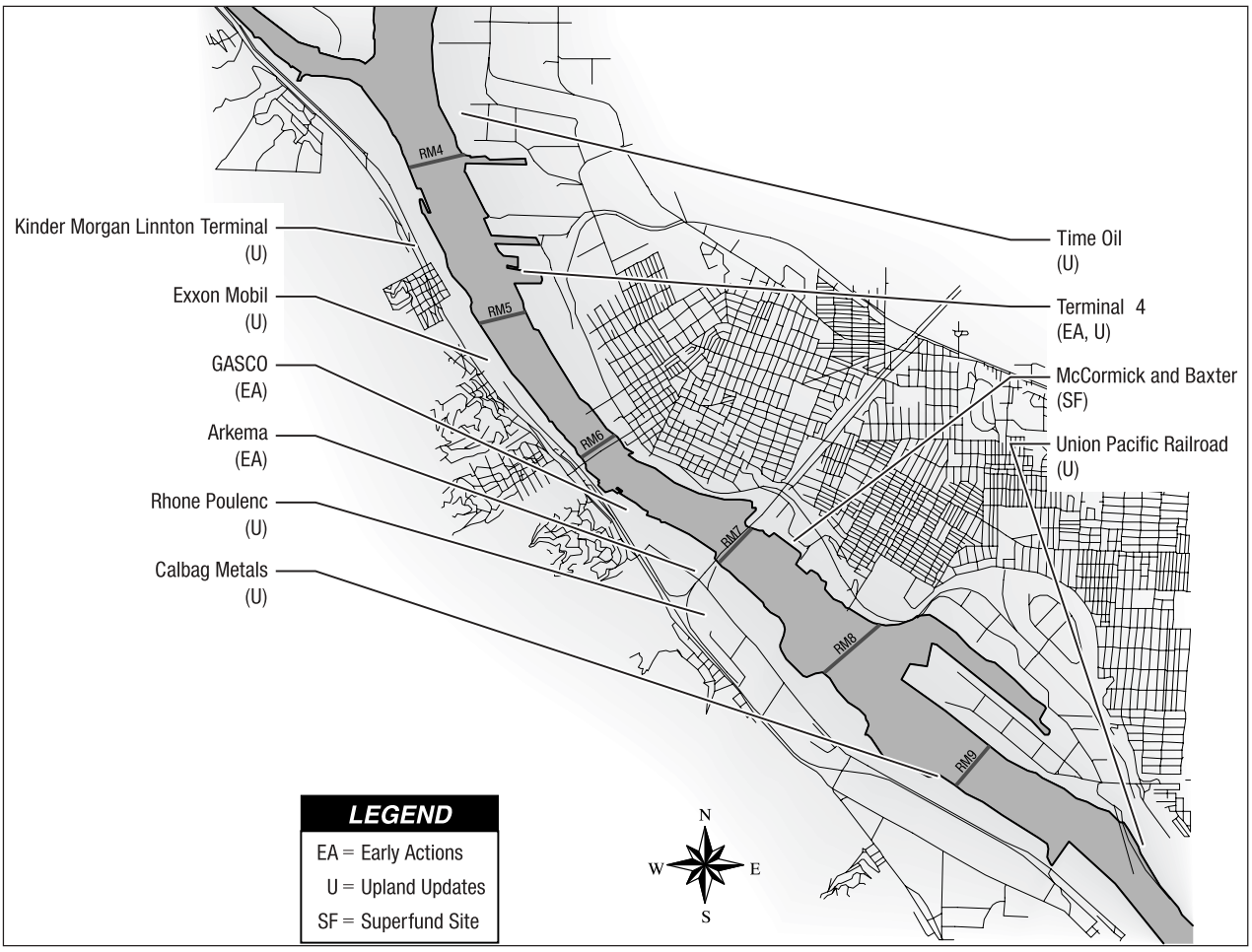
"Early Actions" are removals of contamination at sites where, because of risks to people or wildlife, EPA should not wait to begin cleanup. These sites may require additional cleanup if the harbor-wide Record of Decision requires it.

Terminal 4 early action cleanup decision is pending — This spring, EPA will select a cleanup plan to reduce risk from sediments contaminated with petroleum products, metals, pesticides and polychlorinated biphenyls at the Port of Portland Terminal 4. EPA accepted public comment by letter, e-mail and public hearing between June 6 and September 7, 2005.

Four alternatives were included in an Engineering Evaluation/Cost Analysis (EE/CA) presented to EPA by the Port of Portland. Each cleanup alternative had to protect human health and the environment to be included in the analysis. Also, each alternative includes a combination of the proven methods for cleaning up contaminated sediments: monitored natural recovery, capping and dredging.

The majority of public comment expressed concern or opposition to a Confined Disposal Facility in the

(continued)



Portland Harbor locations featured in this newsletter.

EARLY ACTION UPDATES *(continued)*

preferred action (Alternative C in the EE/CA). This winter, EPA carefully considered and evaluated public input on the alternatives presented in the EE/CA, and is currently consulting with six tribal governments before selecting a final cleanup plan.

Arkema plans for early action cleanup — In June 2005, EPA and Arkema entered a legal agreement to clean up contaminated riverbank and sediments in the Willamette River at the Arkema site on Front Avenue in Portland. The agreement, an Administrative Order on Consent (AOC), authorizes the third early action cleanup project at the Portland Harbor Superfund site.

Contaminants found at the site that may pose a risk to human health, aquatic life or the environment include dichlorodiphenyl-tricloroethane (DDT), monochlorobenzene (MCB), hexavalent chromium and perchlorate.

Removing contaminants in the intertidal area and submerged lands at Arkema will reduce health risks to people who come into contact with sediment, eat fish and shellfish or drink river water. Cleaning up contamination at Arkema will also protect fish and wildlife that use the area.

Last fall, Arkema presented a draft plan of work to EPA for developing an Engineering Evaluation and Cost Analysis. Preparing the EE/CA and controlling upland sources of contamination will take two to three years. When the EE/CA is complete, EPA will invite public input on the cleanup alternatives.

(continued)

EARLY ACTION UPDATES *(continued)*

GASCO removal completed — With EPA oversight in fall 2005, NW Natural removed a 15,000-cubic-yard tar deposit from river and bank sediment at the former GASCO site, near the St. Johns Bridge in Portland Harbor. Following the removal of the contamination, a protective cap was placed over the dredged area. The tar removal marks the first in-water cleanup action since Portland Harbor was listed as a Superfund site in 2000.

An engineered silt-curtain system was designed to contain contamination loosened during removal and prevent fish from entering the dredged area. The area outside the silt curtain was closely monitored. Contaminated sediment was taken by barge and then truck for disposal at a hazardous waste landfill near Arlington, Oregon.

Removal of the tar deposit benefits the Willamette River by successfully eliminating an active source of contamination. However, some short-term impacts to water quality during the removal were not acceptable to EPA. The project is being evaluated to identify ways to improve future dredging projects.

The tar deposit at the former GASCO site was created by discharges from the oil gasification facility in the early 1900s. The tar had high levels of total polycyclic aromatic hydrocarbon (TPAH), benzene and other chemicals.

For more information about **GASCO** you can go to EPA's website: http://yosemite.epa.gov/R10/cleanup.nsf/ph/GASCO .

ELIMINATING SOURCES OF POLLUTION TO THE RIVER

Joint Source Control Strategy

In December 2005, EPA and DEQ finalized the joint source control strategy for the Portland Harbor Superfund Site after incorporating public comments. This strategy describes how upland properties will be evaluated and defines the process for controlling upland sources of contamination that may adversely impact the Portland Harbor Superfund site.

You can download the Portland Harbor Joint Source Control Strategy from the DEQ website: http://www.deq.state.or.us/nwr/PortlandHarbor/JSCS.htm .

Update on DEQ Source Control work

DEQ is currently working with over sixty property owners along the Willamette River in Portland Harbor to identify, control and eliminate sources of pollution to the river. Here is an update on work at some of these sites, shown on the map on page 3.

Oregon Steel Mills is investigating potential sources of pollution on its property. The company installed seven beach and seven bank monitoring wells to learn more about the potential for contaminated groundwater to adversely affect the River. They are evaluating ways to keep PCB-and metal contaminated riverbank soil from eroding to the river and are looking at upgrading the stormwater system. Source control work is expected to begin over the next year.

Kinder Morgan Linnton Terminal (formerly GATX) continues to operate a pump-and-treat system. The system removes and contains contaminated groundwater and free-phase petroleum from the southwestern portion of the site. The system was installed in 2004 along the bank where petroleum historically seeped into the river. DEQ and Kinder Morgan are assessing the system's effectiveness, while doing a remedial investigation at the site. Four new monitoring wells were installed in 2005 to learn more about groundwater and petroleum contamination.

Exxon Mobil has expanded their air sparging/vapor-extraction system. This source control

(continued)

action keeps high levels of metals and petroleum hydrocarbons in groundwater from reaching the river. The system injects air into ground-water areas, extracts the chemical vapors, and changes the metal solubility to reduce dissolved chemical concentrations. Storm water discharge with elevated benzene levels on the eastern portion of the site is also being evaluated.

Last summer, **Rhone Poulenc** property owner, Starlink Logistics, Inc. (SLLI), began investigating the down-gradient extent of pollution sources on their site. They are conducting riverbank and beach studies, monitoring well installations, monitoring water elevations and analyzing groundwater. SLLI is doing treatability studies for an interim cleanup action for West Doane Lake and is preparing to sample fish in North Doane Lake later this spring. The former Rhone Poulenc facility manufactured pesticides and herbicides from 1943 to 1990. SLLI agreed to clean up these areas under a 1999 order with DEQ.

A storm water system investigation at the former **Calbag Metals** site resulted in the recent removal of about four tons of contaminated sediment from catch basins and storm water pipes. Removing accumulated sediment reduced a source of contamination to the city storm water system that discharges to the Willamette.

Union Pacific Rail Road is working voluntarily with DEQ to assess and repairthe private storm water conveyance system at the **Albina Yard**, which collects and discharges storm water to the river. Over the last year, 86 tons of material were removed from 18,000 linear feet of the system. More than 7,000 linear feet of the system have been video surveyed to identify areas in need of repair and help determine whether source control actions are needed. The Albina Yard is a major operating rail yard. Petroleum hydrocarbons, zinc, and other metals and chemicals have been detected at the site and additional investigation will help define the extent of these consituents.

Construction complete at McCormick & Baxter — Community plants trees for restoration!

In September, DEQ completed construction work to clean up the McCormick & Baxter Superfund site, which lies within the bounds of the larger Portland Harbor Superfund site. Cleanup work since has then included:

- Removal of 33,000 tons of highly contaminated soils and debris,
- Construction of an underground barrier wall around 16 acres of the site to stop creosote and contaminated groundwater from moving into the river,
- Construction of a 23-acre sediment cap and a six-acre soil cap along the riverbank, and
- Construction of an impermeable cap and an earthen soil cap on the upper part of the site.

With construction now complete, DEQ is verifying whether the cleanup remedies are performing as intended. Long-term monitoring will ensure that the remedies protect human health and the environment.

In February, more than 250 community members commemorated the progress at McCormick & Baxter by planting over 3,000 native trees and shrubs at the site—a major step toward restoration. Another 15,000 native trees were planted after the volunteers finished. The community is eager to see this site returned to productive use.

The McCormick & Baxter Creosoting Company operated from the 1940s to 1990. It produced chemically treated wood products, such as utility poles, using creosote, arsenic, pentachlorophenol and other hazardous substances. Historic dumping and leaking of chemical wastes at the 41-acre site resulted in high levels of contamination in soils, groundwater and river sediments, and posed a threat to people, fish and wildlife. It was listed as a Superfund site in 1994.

About $45 million has been invested to make the site safe for people and the environment. The DEQ has led cleanup work over the past 15 years, in partnership with EPA, tribes, federal fisheries agencies, the City of Portland and others. For more information, contact **Mikell O'Mealy**, DEQ Project Outreach Coordinator, at 503-229-6590.

OTHER SITE INFORMATION

Portland Harbor Safe Fish Consumption Mini-Grants

The Oregon Department of Human Services SHINE Program is pleased to announce the recipients of the 2005-2006 Safe Fish Consumption Health Education Mini-Grant Awards:

- **El Programa Hispano, Catholic Charities**
- **Asian Pacific American Senior Coalition**
- **Hispanic for Christ Youth Group.**

Three organizations will be reaching out to the Latino, Chinese, Vietnamese, and Burmese populations with information about safely selecting and preparing fish. Look for an update on their progress in the next newsletter.

SHINE Responding to Public Comments

The role of SHINE (Superfund Health and Investigation and Education) at the Portland Harbor is to assess the human health effects of exposure to contaminants in the river and educate the community on how to reduce or prevent exposures. In the summer of 2005, SHINE released a second public health assessment to determine the risk of eating fish from the Portland Harbor. SHINE worked with other agencies to collect fish tissue samples to learn which contaminants were present and at what levels. Based on the test results, SHINE concluded that frequent consumption of resident fish—such as carp, bass, and bullhead—from Portland Harbor could result in health problems.

SHINE received comments from the public on the report and will be responding to comments and publishing a final report this spring. The public comment version of the report is available at http://www.healthoregon.org/superfund .

Portland Harbor Fish Advisory

Based on the elevated PCB levels found in fish tissue samples, the Oregon Department of Human Services has issued the following fish advisory for the Portland Harbor (Fremont Bridge to Sauvie Island).

- Women of childbearing age, particularly pregnant or breastfeeding women, children, and people with weak immune systems, thyroid or liver problems, should avoid eating resident fish from Portland Harbor, especially carp, bass and catfish.
- Healthy women beyond childbearing age and healthy adult males should restrict the amount of resident fish eaten from Portland Harbor to no more than one 8-ounce meal per month.
- Non-resident fish, such as salmon and steelhead, are considered an excellent high-protein, low-fat food source and have no restrictions on the amount eaten from Portland Harbor.

NEWS YOU CAN USE

Save Paper — Sign up to get this Newsletter by E-mail

You will soon be able to get the Portland Harbor newsletter, fact sheets, and public comment period notices, plus routine communications and other breaking news about EPA programs and activities in northwest Oregon by e-mail. Instructions for adding your name to the list serve will appear in the next newsletter. If you would like an e-mail when the list serve is available, please contact **Judy Smith** at smith.judy@epa.gov .

Community Advisory Group Weighs in on Early Actions

In 2005, the Portland Harbor Community Advisory Group (CAG) heard presentations from agencies and potentially responsible parties on a number of hot topics, including early actions at GASCO and Terminal 4. The CAG, which represents many community groups and viewpoints, provided EPA with stakeholder perspectives on how these sites should be cleaned up. The CAG is a coalition of

(continued)

Community Advisory Group *(continued)*

dedicated volunteers who hold monthly meetings that are open to everyone. CAG meetings are held at 6543 N. Burlington Ave at 7:00 p.m. on the second Wednesday of each month. See the CAG website for more information http://www.portlandharborcag.org or call CAG Chair **Robin Plance** at 503-240-1923.

CAG Chairman Robin Plance and EPA Community Involvement Coordinator Judy Smith staff a booth with Portland Harbor information at the McCormick & Baxter celebration in February.

Speakers Available to Talk with Your Group

Over the last year, EPA, DEQ, DHS and the LWG visited neighborhood associations and community groups around the Portland Harbor area to talk about what's happening and to learn about community concerns. This group also staffed a booth at the St. Johns Bridge reopening celebration, Arbor Lodge Neighborhood Fair, the Pacific Northwest Sportsman's Show and the North Portland Environmental Health Fair. If you would like someone to meet with your organization or attend a community event to provide Portland Harbor outreach, please contact **Judy Smith**, EPA Community Involvement Coordinator, at 503-326-6994.

CAG Planning Technology Workshop

This spring, the Portland Harbor Community Advisory Group and the Oregon Center for Environmental Health will be sponsoring a workshop entitled "Healthy Communities, Clean River" to explore new, less polluting technologies for cleaning up the contaminated sediments in the Portland Harbor. Companies on the leading edge of sediment treatment technologies will present the latest science and results from sediment clean up projects around the United States. These newer technologies actually treat the sediments so that they are no longer a risk to public health and the environment as an alternative to simply moving them to another site such as a landfill. The workshop is open to all and the general public is encouraged to attend. The workshop is Saturday, June 3, 2006 at the St. Johns Community Center.

Co-sponsors include the U.S. Environmental Protection Agency Region 10 and the Northwest Environmental Business Council. For information contact **Jane Harris**, Executive Director, Oregon Center for Environmental Health at 503-241-3762, ext. 102**.**

VISIT US ON THE WEB

(See back page)

CONCTACT US

Chip Humphrey, EPA Project Manager (RI/FS)
503-326-2678 humphrey.chip@epa.gov
Sean Sheldrake, EPA Project Manager (Early Actions)
800-424-4372 sheldrake.sean@epa.gov
Eric Blischke, EPA Project Manager (RI/FS)
503-326-4006 blischke.eric@epa.gov
Kristine Koch, EPA Project Mgr. (Source Control)
206-553-6705 koch.kristine@epa.gov
Judy Smith, EPA Community Involvement Coord.
503-326-6994 smith.judy@epa.gov
Jim Anderson, DEQ Portland Harbor Section Mgr.
503-229-6825 anderson.jim@deq.state.or.us
Mikell O'Mealy, DEQ Portland Harbor Project Coord.
503-229-6590 omealy.mikell@deq.state.or.us

U.S. Environmental Protection Agency
Region 10 ETPA-081
1200 Sixth Avenue
Seattle, WA 98101-1128

Pre-Sorted Standard
Postage and Fees Paid
U.S. EPA
Permit No. G-35
Seattle, WA

Return Service Requested

PORTLAND HARBOR NEWSLETTER
PORTLAND, OREGON
SPRING 2006

FOR MORE INFORMATION

Information repositories are located at the following Multnomah County libraries:

St. Johns Branch Library
Reference Desk
7510 N. Charleston Avenue

Northwest Branch Library
Reference Desk
2300 NW Thurman Street

Central Library Government Documents
Reference Desk
801 SW 10th Avenue

VISIT US ON THE WEB

http://yosemite.epa.gov/R10/CLEANUP.NSF/sites/PtldHarbor
and
http://www.deq.state.or.us/nwr/PortlandHarbor/ph.htm

Alternative formats are available upon request by calling Judy Smith at 503-326-6994.